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Application No.: 10/668,735

Case No.: 58727US002

## REMARKS

Claims 1, 4, 6-10, 12, 14-17, 20, 23-26, 28, and 30-38 are pending. Claims 6-9 have been withdrawn. Applicants respectfully request reconsideration of this application in view of the following remarks.

**I. Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 are Enabled under 35 U.S.C. § 112, First Paragraph**

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 stand rejected under 35 U.S.C. § 112, first paragraph, as alleging being based on a disclosure that is not enabling. The Office Action submits that the binder, grinding aid and the abrasive particles, as defined on page 13, lines 24-26 are critical or essential to the practice of the invention but not included in the claims. Applicants respectfully disagree.

The specification states at page 13, lines 24-26:

An essential step to make any of the inventive abrasive articles is to prepare the slurry. The slurry is made by combining together by any suitable mixing technique the binder precursor, the grinding aid, the abrasive particles and the optional additives.

The cited section clearly states that "[a]n essential step ... is to prepare the slurry." The cited language, however, does not state that grinding aids are essential. One skilled in the art reading the cited language would, at most, understand the **preparation** of a slurry to be an essential step in making the abrasive article, and that the slurry may comprise the combination of a binder precursor, a grinding aid, and abrasive particles. Further, as discussed at page 9, line 11, through page 11 line 4, one skilled in the art would recognize the added benefits of adding a grinding aid to the slurry, but that doing so would not be essential to creating a useful abrasive article embodying the claimed invention.

Applicants respectfully maintain that claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 are enabled under 35 U.S.C. § 112, first paragraph, and the rejection should be withdrawn.

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**II. Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 are Not Obvious over Hoopman, in view of Neff, Adefris et al., Skeem et al. and optionally Wei et al.**

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 stand rejected as allegedly being obvious over Hoopman (U.S. Pat. No. 5,672,097), in view of Neff (U.S. Pat. No. 5,578,099), Adefris et al. (U.S. Pat. No. 6,319,108), Skeem et al. (U.S. Pat. No. 6,817,936), and optionally Wei et al. (U.S. Pat. No. 5,833,724). Applicants respectfully traverse this rejection because there is no evidence of record indicating that those of ordinary skill would have been properly motivated to combine the cited references, much less to combine them in a manner that would have produced Applicants' claimed invention.

The disclosures by Hoopman, Neff, Adefris et al., and Wei et al. and the Examiner's assertions concerning the same were discussed and rebutted in Applicants' prior remarks. Those arguments are not repeated herein, but continue to apply.

In response to Applicants' arguments, the Examiner has added the disclosure of Skeem et al. to support the obviousness rejection. Skeem et al. reports a metal single layer abrasive cutting tool with multiple cutting levels. In some embodiments, the cutting surface to which the abrasive grains are affixed is angled relative to the workpiece surface (see, e.g., FIG. 3). The cutting tool is reported to have longer life and higher penetration rates than conventional flat rimmed single layer tools and single layer tools having teeth (col. 4, lines 7-9). The cutting tool preferably comprises metal teeth covered with diamond (col. 8, lines 9-16). Significantly, Skeem et al. report a **cutting tool** that can be used, for example, to cut **concrete** (see, e.g., col. 8, lines 12-16; col. 9, lines 20-23 "[The SL tool of the present invention] is especially desirable in masonry applications").

The abrasive article of the presently claimed invention has been found to be particularly well-suited to removing material from **wooden** workpieces (see, e.g., page 22, lines 3-7). In this regard, the undercut sidewall performs the majority of material removal. The abrasive particles on the planar top section then lightly scratch the surface of the workpiece, allowing the workpiece to take stain without further preparation.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Nothing in

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the cited references would motivate one to make the abrasive article claimed in the present application. In reference to the teachings of Skeem et al., one skilled in the art of abrasives, interested in eliminating steps in preparing wood for staining, would find nothing in the teachings of Skeem et al. suggesting that the angled surface of a cutting tool would be useful for an abrasive article used to prepare wood surface for stain.

The Examiner alleges that the "benefits defined by Skeem provide the motivation" to modify the combined teachings of Hoopman, Neff, and Adefris et al. to produce an abrasive article with an angled top (Office Action, page 4, lines 3-15). The purported benefit of the angled top surface taught by Skeem is "reduced dulling of the feature" (Office Action, page 3, line 12). As discussed, Applicants' claimed abrasive article has been found to provide cut (via the undercut sidewall) while preparing a wood surface for finish (via the angled planar top section). It is unclear how one skilled in the art interested in eliminating steps in preparing wood for staining, would consider a feature that "reduces dulling".

In summary, the cited reference fail to support the Examiner's allegation that those of ordinary skill would have been properly motivated to combine the cited references in a manner that would have produced Applicants' claimed invention. Applicants' respectfully request that the rejections of claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 under 35 U.S.C. § 103(a) be withdrawn.

**III. Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 are Not Obvious over Adefris et al., in view of Hoopman, Skeem et al., and optionally Wei et al.**

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 stand rejected as allegedly being obvious over Adefris et al. (U.S. Pat. No. 6,319,108), in view of Hoopman (U.S. Pat. No. 5,672,097), Skeem et al. (U.S. Pat. No. 6,817,936), and optionally Wei et al. (U.S. Pat. No. 5,833,724). Applicants respectfully traverse this rejection because there is no evidence of record indicating that those of ordinary skill would have been properly motivated to combine the cited references, much less to combine them in a manner that would have produced Applicants' claimed invention.

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The disclosures by Adfris et al., Hoopman, and Wei et al. and the Examiner's assertions concerning the same were discussed and rebutted in Applicants' prior remarks. Those arguments are not repeated herein, but continue to apply.

As discussed above, one skilled in the art of abrasives, interested in eliminating steps in preparing wood for staining, would find nothing in the teachings of Skeem et al. suggesting that the angled surface of a cutting tool would be useful for an abrasive article used to prepare wood surface for stain. Accordingly, there is no motivation to combine the teachings of Skeem et al. with the teachings of Adfris et al., Hoopman, and Wei et al. to produce Applicants' claimed invention. Applicants' respectfully request that the rejections of claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 under 35 U.S.C. § 103(a) be withdrawn.

**IV. Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 are Not Obvious over Kaisaki, in view of Skeem et al. and optionally Wei et al.**

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 stand rejected as allegedly being obvious over Kaisaki et al. (U.S. Pat. No. 6,194,317) in view of Skeem et al. (U.S. Pat. No. 6,817,936), and optionally Wei et al. (U.S. Pat. No. 5,833,724). Applicants respectfully traverse this rejection because there is no evidence of record indicating that those of ordinary skill would have been properly motivated to combine the cited references, much less to combine them in a manner that would have produced Applicants' claimed invention.

The disclosures by Kaisaki and Wei et al. and the Examiner's assertions concerning the same were discussed and rebutted in Applicants' prior remarks. Those arguments are not repeated herein, but continue to apply.

As discussed above, one skilled in the art of abrasives, interested in eliminating steps in preparing wood for staining, would find nothing in the teachings of Skeem et al. suggesting that the angled surface of a cutting tool would be useful for an abrasive article used to prepare wood surface for stain. Accordingly, there is no motivation to combine the teachings of Skeem et al. with the teachings of Kaisake et al. and Wei et al. to produce Applicants' claimed invention. Applicants' respectfully request that the rejections of claims 1, 4, 10, 12, 14-17, 20, 23-26, 28, and 30-38 under 35 U.S.C. § 103(a) be withdrawn.

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**V. Claims 34-38 are Not Obvious over Kaisaki et al. in view of Skeem et al. and optionally Wei et al., and further in view of Hoopman**

Claims 34-38 stand rejected as allegedly being obvious over Kaisaki et al. (U.S. Pat. No. 6,194,317) in view of Skeem et al. (U.S. Pat. No. 6,817,936), and optionally Wei et al. (U.S. Pat. No. 5,833,724), and further in view of Hoopman (U.S. Pat. No. 5,672,097). Applicants respectfully traverse this rejection because there is no evidence of record indicating that those of ordinary skill would have been properly motivated to combine the cited references, much less to combine them in a manner that would have produced Applicants' claimed invention.

The disclosures by Kaisaki and Wei et al. and the Examiner's assertions concerning the same were discussed and rebutted in Applicants' prior remarks. Those arguments are not repeated herein, but continue to apply.

As discussed above, one skilled in the art of abrasives, interested in eliminating steps in preparing wood for staining, would find nothing in the teachings of Skeem et al. suggesting that the angled surface of a cutting tool would be useful for an abrasive article used to prepare wood surface for stain. Accordingly, there is no motivation to combine the teachings of Skeem et al. with the teachings of Kaisake et al. and Wei et al. to produce Applicants' claimed invention. Applicants' respectfully request that the rejections of claims 34-38 under 35 U.S.C. § 103(a) be withdrawn.

**VI. Conclusion**

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested. The Examiner is invited to contact Applicant's undersigned representative with any questions concerning Applicant's application.

Respectfully submitted,

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Date

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